

DOCKET NO: 295641US41PCT

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF :  
YANNICK GERARD, ET AL. : EXAMINER: EDWARDS, BRETT J.  
SERIAL NO: 10/591,293 :  
FILED: MARCH 23, 2007 : GROUP ART UNIT: 3781  
FOR: SYSTEM FOR FASTENING TWO :  
COMPONENTS, METHOD OF  
FASTENING BY MEANS OF THIS  
FASTENING SYSTEM, AND FUEL  
SYSTEM

APPEAL BRIEF WITH APPENDICES

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

This is an appeal from a final Office Action dated December 28, 2010. A Notice of Appeal was timely filed together on April 28, 2011.

### I. REAL PARTY IN INTEREST

The real party in interest in this appeal is INERGY AUTOMOTIVE SYSTEMS RESEARCH (SOCIETE ANONYME), having an address at RUE DE RANSBEEK, 310, BRUSSELS, BELGIUM B-1120. INERGY AUTOMOTIVE SYSTEMS RESEARCH (SOCIETE ANONYME) is the real parties in interest by way of assignment recorded in the U.S. Patent and Trademark Office at reel 019068, frame 0148.

### II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative and the assignees are aware of no appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

### III. STATUS OF THE CLAIMS

Claims 11, 16-18, and 20-32 are pending. Claims 11, 16-18, and 20-32 stand rejected, and Claims 1-10, 12-15, and 19 are canceled. The rejection of Claims 11, 16-18, and 20-32 is herein appealed.

### IV. STATUS OF THE AMENDMENTS

In a Final Office Action dated December 28, 2010 (hereinafter "Final Action"), the Examiner finally rejected Claims 11, 16-18, and 20-32. No amendments to the claims have been submitted after the mailing of the Final Action. The attached Claims Appendix (section VIII) reflects Claims 11, 16-18, and 20-32 as presently pending on appeal.

## V. SUMMARY OF THE CLAIMED SUBJECT MATTER<sup>1</sup>

The subject matter recited in the claims on appeal relates to a system and a method for fastening, by welding, a component to a fuel tank.

As discussed at page 1, lines 3-13 of the specification of the application on appeal, liquid and gas tanks used in industry or on board vehicles of various kinds must in general meet sealing and permeability standards with respect to the type of use for which they are designed and also the environmental requirements that they must comply with. At the present time, the requirements regarding the limitation of polluting emissions in the atmosphere and in the environment in general are currently becoming considerably more strict (for example, the PZEV ("Partial Zero Emission Vehicle" standards in California)). In addition, the permitted emission limits have become so low that losses due to leaks and to permeability of the interfaces between accessories and the tank have assumed a relatively higher proportion in the total losses of the tank/accessories system.

Moreover, as discussed at page 1, lines 14-18 of the specification of the application on appeal, it is becoming increasingly common to use tanks with a multilayer structure that includes one or more layers made of an impermeable material. The incorporation of accessories, such as tubular components, into such tanks poses the problem of how to fasten components to an opening made in these tanks in a sealed and impermeable manner.

As discussed at page 1, line 21 to page 2, line 8 of the specification of the application on appeal, various conventional techniques for fastening a tubular component to a tank: (1)

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<sup>1</sup> It is Appellants' understanding that, under the rules of Practice before the Board of Patent Appeals and Interferences, 37 C.F.R. § 41.37(c) requires that a concise explanation of the subject matter recited in each independent claim be provided with reference to the specification by page and line numbers and to the drawings by reference characters. However, Appellants' compliance with such requirements anywhere in this document should in no way be interpreted as limiting the scope of the invention recited in all pending claims, but simply as non-limiting examples thereof.

result in unsatisfactory fastening strength for a tubular component that is directly mounted to a tank, and (2) the shape of the component, and especially its thickness at the point of the weld, typically includes an overthickness, which uses up material and takes time (an additional manufacturing step) and therefore sometimes incurs a not-insignificant additional cost.

The inventors developed a unique combination of elements that, unlike conventional fastening systems for fastening a part of generally tubular shape to a tank, has an increased strength and greater stability by the very design of the profile of the components in the fastening region, without having to make use of an overthickness or a complicated geometry, which is difficult to mold. Specifically, each of the claims on appeal includes the unique combination of: (1) a tank and a tubular component that each include a multilayer structure, (2) a component and opening that include conical surfaces, and (3) along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank.

Specifically, the Claims that are separately argued on appeal recite:

A. CLAIM 11.

Claim 11 recites a system for fastening, by welding, a component to a motor vehicle fuel tank. Examples of the system are illustrated in Figures 1-8 of the application on appeal. The system includes a component (2) including a portion with a conical surface profile. (Page 7, lines 14-20). The component includes a tubular shape. (Page 6, lines 33-35). The system includes a tank (1) with an opening. (Page 7, lines 14-20). A perimeter of the opening includes a conical surface profile. (Page 7, lines 14-20). The system further includes a welded area (3) between at least one portion of the conical surface of the perimeter

of the opening in the tank and at least one portion of the conical surface of the component. (Page 7, lines 32-34). The perimeter of the opening of the tank is a deformed portion of a wall of the tank. (Page 4, line 10 to page 5, line 16). The component and the tank are molded in one or more molds including impressions corresponding to the conical surfaces. (Page 7, lines 14-20). The tank and component each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank. (Page 6, lines 4-11). The multilayer structure includes at least two layers of high-density polyethylene (HDPE) between which a layer comprising an ethylene/vinyl alcohol copolymer (EVOH) is inserted. (Page 4, lines 7-9).

**B. CLAIM 18.**

Claim 18 recites a method of manufacturing a fuel system. The method includes manufacturing a tank (1) comprising an opening, a perimeter of which has a conical surface profile. (Page 7, lines 14-20). The perimeter of the opening is made by deforming a wall of the tank. (Page 4, line 10 to page 5, line 16). The method further includes manufacturing a component (2) including a part with a conical surface profile. The component includes a tubular shape. (Page 6, lines 33-35). The method further includes welding at least one portion (3) of the conical surface of the perimeter of the opening in the tank to at least one portion (3) of the conical surface of the component. (Page 7, lines 32-34). The tank and the component are manufactured by molding by using one or more molds including impressions corresponding to the conical surfaces. (Page 7, lines 14-20). The tank and component each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the

component and a number of layers in the tank. (Page 6, lines 4-11). The multilayer structure includes at least two layers of high-density polyethylene (HDPE) between which a layer comprising an ethylene/vinyl alcohol copolymer (EVOH) is inserted. (Page 4, lines 7-9).

C. CLAIM 24.

Claim 24 depends from Claim 11 and recites further features of the system. Claim 21 recites the wall of the tank includes a bent portion defining the perimeter of the opening of the tank. Claim 24 recites the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank. (Page 4, lines 10-29).

D. CLAIM 28.

Claim 28 depends from 18 through Claims 25 and recites further features of the method. Claims 25 recites the wall of the tank includes a bent portion defining the perimeter of the opening of the tank. Claim 28 recites the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank. (Page 4, lines 10-29).

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Whether Claims 11, 16-18, 21, 22, 24-26, and 28-32 are unpatentable under 35 U.S.C. § 103(a) over Muirhead (U.S. Patent No. 6,661,339) in view of Brandner et al. (U.S. Patent Pub. 2005/0115973, herein “Brandner”).

Whether Claim 20 is unpatentable under 35 U.S.C. § 103(a) over Muirhead in view of Brandner and Abare (U.S. Patent No. 6,627,016).

Whether Claims 23 and 27 are unpatentable under 35 U.S.C. § 103(a) over Muirhead in view of Brandner and Goto (U.S. Patent Pub. 2002/0017527)

## VII. ARGUMENT

### A. THE REJECTION OF CLAIMS 11, 16-18, 21, 22, 24-26, AND 28-32 UNDER 35 U.S.C. § 103(A) AS UNPATENTABLE OVER MUIRHEAD IN VIEW OF BRANDNER.

1. Claims 11, 16-18, 21, 22, 25, 26, and 29-32.

Independent Claim 11 recites, in part (emphasis added):

**a component including a portion with a conical surface profile, the component including a tubular shape;  
a tank with an opening, a perimeter of which opening includes a conical surface profile; and**

...

**wherein the component and the tank are molded in one or more molds including impressions corresponding to the conical surfaces,**

**wherein the tank and component each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank, and**

**wherein the multilayer structure includes at least two layers of high-density polyethylene (HDPE) between which a layer comprising an ethylene/vinyl alcohol copolymer (EVOH) is inserted.**

Thus, the component and opening include conical surfaces. The tank and component each include a multilayer structure. Along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank. Notably, the component includes a tubular shape. Claim 18 recites substantially similar features in method format.

As discussed at page 5, lines 4-16 of the specification of the application on appeal, the conical profile recited in the claims gives the fastening system greater strength, in particular when the components are subjected to a load (for example when fastening them). This is because, when a component is fastened to the wall of a tank if the wall does not have relief in



the weld zone, the load exerted on the wall by the component during fastening results in a deformation of the wall, directed towards the inside of the tank. The quality of the fastening is in this case limited and the length of contact between the accessory and the tank wall is reduced. On the other hand, when the tank wall has a profile of conical shape, it deforms less under an external load and the contact between the accessory and the wall covers a larger area than in the previous case.

Further, as discussed at page 6, lines 8-11 of the specification of the application on appeal, the arrangement of the layers recited in Claims 11 and 18 reduces the risks of a liquid and/or gas leak and improves the level of impermeability in the fastening region, in particular when the fastening is carried out by welding.

Thus, in the present case, at least one point of novelty in the claims on appeal is the unique combination of: (a) a multi-layer component that is directly welded to a tank, (b) with a specific arrangement of layers, and (c) that have corresponding conical surfaces.

Turning to the cited references, the Final Action alleges the combined teachings of Muirhead and Brandner render the claimed configuration obvious. However, when the complete teachings of each of these references is considered as a whole, no reasonable combination of Muirhead and Brandner would result in the unique arrangement recited in each of Claims 11 and 18.

Specifically, Muirhead describes a system in which a flange, which has a single layer structure, is utilized as an intermediate element to affix a component to a fuel tank. Although the structure of the flange of Muirhead includes conical surfaces, this arrangement only makes sense within the context of a flange that is utilized as an intermediate element to affix a component to a fuel tank, as will be discussed in greater detail below.

The difference between Muirhead and Brandner is significant, and a person of ordinary skill in the art would not have found the combination of these references obvious at the time the inventions recited in Claims 11 and 18 were made. The Final Action cites Muirhead for the conical surface recited in Claim 11. However, if one were to eliminate the flange plate from the Muirhead tank and weld accessories **directly** to the tank as set forth in Brandner, there would be no reason to keep the conical recess of Muirhead. Specifically, the purpose of the conical recess in Muirhead is to be able to dispose a flange plate interiorly upon the surface of the intended end product to reduce the vertical space occupied by the apparatus. In this regard, Muirhead states:

It should also be noted that the flange plate 104 is interiorly disposed upon the surface of the intended end product to reduce the vertical space occupied by the apparatus. This is in marked contrast to the inspection tower of U.S. Pat. No. 6,179,145, which is exteriorly disposed upon a fuel tank surface.<sup>2</sup>

Hence, Muirhead is concerned with efficiently attaching a flange plate to a fuel tank with a view to obtaining an end product with **reduced height**.

Indeed, Muirhead discusses, at column 3, lines 30-67, and column 4, lines 34-42, the importance of both utilizing an intermediate flange and ensuring there is reduced height in the flange.

However, as noted above, Brandner describes a **direct** attachment of an accessory such as a fill nipple to the tank, whereas, Muirhead uses a flange plate (122) to carry the accessories (125) that are in turn connected to the flange plate. When a component is directly attached to the tank, as recited in the claims on appeal and as described in Brandner, the height gain caused by the flange plate in the original configuration would no longer occur. In

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<sup>2</sup> Muirhead, col. 12, lines 12-15.

other words, modifying Muirhead to include the features of Brandner as asserted in the Final Action would cause Muirhead to omit at least one other feature recited in Claim 11.

Accordingly, a person of ordinary skill in the art would not have found it obvious to produce the system recited in Claim 11, which recites a component including a portion with a conical surface **as well as** a tank and component that each include a multilayer structure.

Further, even if one were to combine Muirhead and Brandner, any the combination would not include at least two of the features recited in the claims on appeal: (1) a conically welded component that includes a tubular shape, and (2) a tank and component which each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank.

With respect to the first feature, page 2 of the Final Action asserts that Muirhead discloses a component including a tubular shape. However, as is readily apparent from a review of Figure 13 of Muirhead, reproduced below, Muirhead merely describes a flange plate 104 that is welded to a tank. Components, such as the aperture plate 122 are affixed to the flange plate 104. No reasonable interpretation of the plates of Muirhead would recognize this structure as including a tubular shape. As such, Muirhead does not disclose or suggest any components which include a tubular shape.

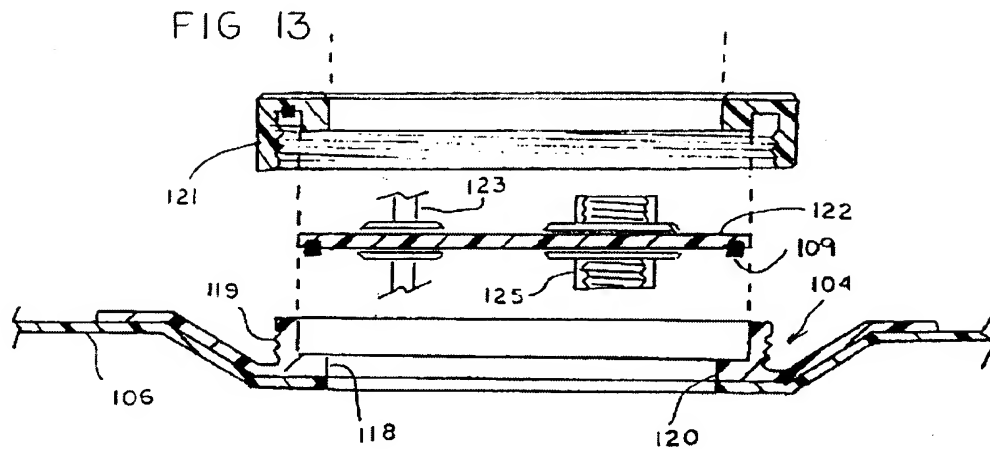


Figure 13 of Muirhead

Indeed, it is notable that none of the references of record disclose or suggest the combination of a “conical” welding a tubular component directly to a tank.

With respect to the second feature noted above, it must be recognized that Brandner describes that the fill nipple should be a multilayer structure simply to avoid fuel diffusion through the walls of the fill nipple itself. Indeed, Brandner compares the fill nipple described therein with prior art monolayer HDPE fill nipples which “were not highly effective at reducing or inhibiting hydrocarbon permeation to the atmosphere.”<sup>3</sup> This concern is unrelated to the specific permeability problem occurring at the weld. For this problem, Brandner provides an additional cover 66, as described at paragraph [0066] of Brandner.

Hence, any reasonable combination of Muirhead with Brandner would be a monolayer flange plate, welded to the conical recess of the fuel tank, and covered by an additional impermeable cover. As the teachings in Brandner relate to the component, the component itself that is screwed on to the flange would have a multilayer construction. This approach does not lead to the multilayer system recited in Claim 11, in which along the entire

<sup>3</sup> Brandner, [0003].

surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank.

Nevertheless, the Final Action notes, in the paragraph bridging pages 10-11 (emphasis added):

...Brandner was used for the teaching of forming a component of a multilayered structure in order to reduce permeation and not for the specific component. The only modification made to Muirhead was in the material of the component... since the component taught by Brandner is multilayered at the site of the weld and Brandner clearly discloses the advantages of a multilayering, one of ordinary skill in the art would recognize the benefits of forming the component in a multilayered structure in order to reduce permeation. Using an additional impermeable cover at the site of the weld does not diminish the fact that fuel permeation at the site of the weld is reduced due to component being multilayered.

Thus, the Final Action relies on the teachings of Brandner for “reduced permeation” but does so selectively, by turning a blind eye to the explicit teachings in Brandner as to how to reduce permeation in the area of the weld: provide an additional cover 66. The inclusion of the additional cover 66 would result in a construction in which, along the entire surface where the component is fastened to the tank, the number of superposed layers is not equal to a sum of a number of layers in the component and a number of layers in the tank.

Accordingly, Appellants respectfully submit that independent Claims 11 and 18 and the Claims depending therefrom patentably distinguish over any reasonable combination of Muirhead and Brandner.

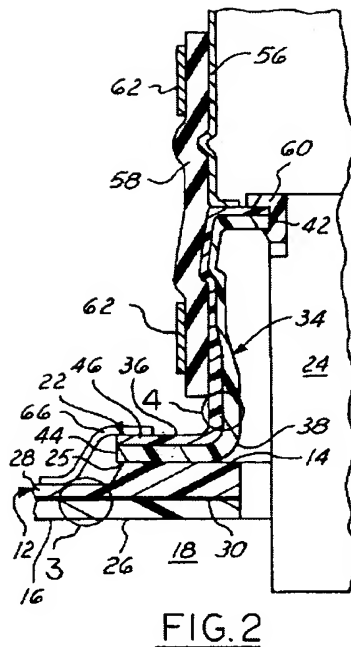
Accordingly, the examiner’s rejection of Claims 11 and 18 is improper because even the combined teaching of Muirhead and Brandner fails to disclose or suggest all of the features recited in Claims 11 or 18. It is respectfully requested the rejections of Claims 11 and 18 be REVERSED.

Although dependent Claims 16, 17, 21, 22, 25, 26, and 29-32 recite additional features which are patentable, particularly in combination with the features of the claims from which they depend, to simplify issues on appeal, Appellants do not separately argue patentability of the remaining claims of this group. These claims are patentable at least by virtue of their respective dependence upon Claims 11 and 18.

2. Claims 24 and 28.

Claims 24 and 28 respectively depend from Claims 11 and 18 through Claims 21 and 25. Claims 21 and 25 each recite the wall of the tank includes a bent portion defining the perimeter of the opening of the tank. Claims 24 and 28 each recite the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank.

As discussed at page 1, line 21 to page 2, line 8 of the specification of the application on appeal, various conventional techniques that for fastening a component to a tank: (1) result in unsatisfactory fastening strength for a component that is directly mounted to a tank, and (2) the shape of the component, and especially its thickness at the point of the weld, typically includes an overthickness, which uses up material and takes time (an additional manufacturing step) and therefore sometimes incurs a not-insignificant additional cost. As is readily apparent from Figure 2 of Brandner, reproduced below, the thickness of a wall portion of the tank forming a portion of the tank that is welded is not the same as a thickness of a wall portion of the tank surrounding the portion of the tank that is welded. Instead, the Brandner includes the conventional overthickness.



**Figure 2 of Brandner**

In the present case, if one of ordinary skill in the art were, as the Final Action suggests, inspired to replace the materials of the flange in Muirhead with those of the component in Brandner, they would also look to the teachings of Brandner as to how to achieve an acceptable weld for those materials. Nevertheless, the Examiner relies on the thickness of the single layer flange described in Muirhead for the features recited in Claims 24 and 28 without regard for how that thickness would change once the materials of Brandner are utilized. This application of the combined teachings of Brandner and Muirhead is inconsistent with the law. “It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art.” *Application of Wesslau*, 353 F.2d 238, 241

(C.C.P.A. 1965); *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve*, 796 F.2d 443, 448 (Fed. Cir. 1986), *cert. denied*, 484 U.S. 823 (1987).

Any reasonable substitution of the materials in Brandner for the materials in Muirhead would also be accompanied by the thicknesses that are suggested in Brandner. As noted above, the thickness of a wall portion of the tank forming a portion of the tank that is welded is not the same as a thickness of a wall portion of the tank surrounding the portion of the tank that is welded. Instead, the Brandner includes the conventional overthickness. Thus, the resulting structure would not meet the limitation in Claims 24 and 28 that the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank.

Accordingly, the examiner's rejection of Claims 24 and 28 is improper because even the combined teaching of Muirhead and Brandner fail to disclose or suggest all of the features recited in Claims 24 or 28. It is respectfully requested the rejections of Claims 24 and 28 be REVERSED.

**B. THE REJECTION OF CLAIM 20 UNDER 35 U.S.C. § 103(A) AS UNPATENTABLE OVER MUIRHEAD IN VIEW OF BRANDNER AND ABARE.**

Although dependent Claim 20 recites additional features which are patentable, particularly in combination with the features of Claim 18, from which it depends, to simplify issues on appeal, Appellants do not separately argue patentability of Claim 18. Claim 20 is patentable at least by virtue of its dependence upon Claim 18.



C. THE REJECTION OF CLAIMS 23 AND 27 UNDER 35 U.S.C. § 103(A) AS  
UNPATENTABLE OVER MUIRHEAD IN VIEW OF BRANDNER AND GOTO.

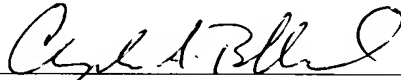
Although dependent Claims 23 and 27 recite additional features which are patentable, particularly in combination with the features of the claims from which they depend, to simplify issues on appeal, Appellants do not separately argue patentability of the remaining claims of this group. These claims are patentable at least by virtue of their respective dependence upon Claims 11 and 18.

D. CONCLUSION

In view of the above remarks, Appellants respectfully request the rejections of the  
Final Action dated December 28, 2010 be REVERSED.

Respectfully submitted,

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### VIII. CLAIMS APPENDIX

Claim 11 (Rejected): A system for fastening, by welding, a component to a motor vehicle fuel tank, the system comprising:

a component including a portion with a conical surface profile, the component including a tubular shape;

a tank with an opening, a perimeter of which opening includes a conical surface profile; and

a welded area between at least one portion of the conical surface of the perimeter of the opening in the tank and at least one portion of the conical surface of the component,

wherein the perimeter of the opening of the tank is a deformed portion of a wall of the tank,

wherein the component and the tank are molded in one or more molds including impressions corresponding to the conical surfaces,

wherein the tank and component each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank, and

wherein the multilayer structure includes at least two layers of high-density polyethylene (HDPE) between which a layer comprising an ethylene/vinyl alcohol copolymer (EVOH) is inserted.

Claim 16 (Rejected): The fastening system according to Claim 11, wherein the component includes at least one of a plate, a delivery tube, a fitting, a spout, a valve, or any other accessory of the fuel tank.

Claim 17 (Rejected): A fuel system comprising a fuel tank and at least one accessory fastened to the fuel tank by the fastening system according to Claim 11.

Claim 18 (Rejected): A method of manufacturing a fuel system, comprising:  
manufacturing a tank comprising an opening, a perimeter of which has a conical surface profile, the perimeter of the opening being made by deforming a wall of the tank;  
manufacturing a component including a part with a conical surface profile, the component including a tubular shape; and  
welding at least one portion of the conical surface of the perimeter of the opening in the tank to at least one portion of the conical surface of the component, and  
wherein the tank and the component are manufactured by molding by using one or more molds including impressions corresponding to the conical surfaces,  
wherein the tank and component each include a multilayer structure and, along the entire surface where the component is fastened to the tank, a number of superposed layers is equal to a sum of a number of layers in the component and a number of layers in the tank, and  
wherein the multilayer structure includes at least two layers of high-density polyethylene (HDPE) between which a layer comprising an ethylene/vinyl alcohol copolymer (EVOH) is inserted.

Claim 20 (Rejected): The method according to Claim 18, wherein the welding is hot-plate welding using self-centering hot plates or a robotic system optionally controlled by a camera.

Claim 21 (Rejected): The fastening system according to Claim 11, wherein the wall of the tank includes a bent portion defining the perimeter of the opening of the tank.

Claim 22 (Rejected): The fastening system according to Claim 21, wherein the conical surface of the perimeter of the opening in the tank comprises a cavity that receives the conical surface profile of the component.

Claim 23 (Rejected): The fastening system according to Claim 21, wherein the conical surface of the perimeter of the opening in the tank protrudes from a portion of the tank wall in a direction toward the component.

Claim 24 (Rejected): The fastening system according to Claim 21, wherein the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank.

Claim 25 (Rejected): The fastening system according to Claim 18, wherein the wall of the tank includes a bent portion defining the perimeter of the opening of the tank.

Claim 26 (Rejected): The fastening system according to Claim 25, wherein the conical surface of the perimeter of the opening in the tank comprises a cavity that receives the conical surface profile of the component.

Claim 27 (Rejected): The fastening system according to Claim 25, wherein the conical surface of the perimeter of the opening in the tank protrudes from a portion of the tank wall in a direction toward the component.

Claim 28 (Rejected): The fastening system according to Claim 25, wherein the thickness of a wall portion of the tank forming the conical surface of the tank is a same thickness as a thickness of a wall portion of the tank surrounding the conical surface of the tank.

Claim 29 (Rejected): The fastening system according to Claim 11, wherein the conical surface of the component is defined by a circular arc as viewed in a direction perpendicular to the axis of the conical surface profile.

Claim 30 (Rejected): The method according to Claim 18, wherein the conical surface of the component is defined by a circular arc as viewed in a direction perpendicular to the axis of the conical surface profile.

Claim 31 (Rejected): The method according to Claim 18, wherein the component covers the entire opening.

Claim 32 (Rejected): The fastening system according to Claim 25, wherein the component covers the entire opening.

Application Serial No. 10/591,293  
Appeal Brief.

IX. EVIDENCE APPENDIX

None.



X. RELATED PROCEEDINGS APPENDIX

None.